

## REMARKS

In view of the above amendments and following remarks, favorable reconsideration in this application is respectfully requested.

### Claim Rejection- 35 U.S.C. §101

The Examiner rejects claims 1-18 under 35 U.S.C. §101 as being directed to non-statutory subject matter. The Examiner indicates that the term “computer-implemented” of claim 1 has not been given patentable weight. It appears, however, that the Examiner has withdrawn the substance of the rejection under §101 since the Examiner no longer contends that the invention is an abstract idea and since the Examiner indicates that claim 14 is allowable. Accordingly, the issue raised by the Examiner is one of the scope of the claims and not a rejection under §101, so that the issue is moot. Regardless, it should be noted that the “technological arts” test applied by the Examiner in the prior Office Action is no longer proper under current Interim PTO guidelines (see page 45) in view of *Ex parte Lundgren*, 76 USPQ 2d 1385 (BPAI Sept. 2005). The cover page and Annex III (pages 42-49) of the PTO Interim Guidelines are attached hereto.

### Claim Rejection – 35 U.S.C. §102

The Examiner rejects claims 1-33 under 35 U.S.C. §102 as anticipated by Powell (U.S. Patent No. 6,195,590). The Examiner indicates that claims 14 and 31 contain allowable subject

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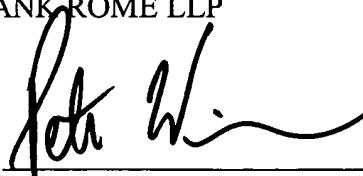
matter. Accordingly, independent claims 1 and 19 have been rewritten to incorporate the subject matter of claims 14 and 31, respectively. It is submitted that the application is now in condition for allowance.

In the event there are any questions relating to this Amendment or to the application in general, it would be appreciated if the Examiner would telephone the undersigned attorney concerning such questions so that the prosecution of this application may be expedited.

Please charge any shortage or credit any overpayment of fees to BLANK ROME LLP, Deposit Account No. 23-2185 (119645.00102). In the event that a petition for an extension of time is required to be submitted herewith and in the event that a separate petition does not accompany this response, Applicant hereby petitions under 37 CFR 1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized above.

Respectfully submitted,

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## Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility

In the mid-1990's, the USPTO sought to clarify the legal requirements for statutory subject matter with regard to computer-related inventions. See Examination Guidelines for Computer Related Inventions, 61 Fed. Reg. 7478 (1996). Subsequent to the publication of those guidelines, the Court of Appeals for the Federal Circuit issued opinions in State Street Bank & Trust Co. v. Signature Financial Group Inc., 149 F. 3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1998) and AT&T Corp. v. Excel Communications, Inc., 172 F.3d 1352, 50 USPQ2d 1447 (Fed. Cir. 1999). These decisions explained that, to be eligible for patent protection, the claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. Since this time, the USPTO has seen increasing numbers of applications outside the realm of computer-related inventions that raise subject matter eligibility issues. In order to assist examiners in identifying and resolving these issues, the USPTO is issuing these interim examination guidelines to assist USPTO personnel in the examination of patent applications to determine whether the subject matter as claimed is eligible for patent protection.

The principal objective of these guidelines is to assist examiners in determining, on a case-by-case basis, whether a claimed invention falls within a judicial exception to statutory subject matter (i.e., is nothing more than an abstract idea, law of nature, or natural phenomenon), or whether it is a practical application of a judicial exception

## ANNEX III

### Improper Tests For Subject Matter Eligibility

As set forth in the patent eligible subject matter interim guidelines, a practical application of a 35 U.S.C. § 101 judicial exception is claimed if the claimed invention physically transforms an article or physical object to a different state or thing, or if the claimed invention otherwise produces a useful, concrete, and tangible result.

Therefore the following tests are **not** to be applied by examiners in determining whether the claimed invention is patent eligible subject matter:

- (A) "not in the technological arts" test
- (B) Freeman-Walter-Abele test
- (C) mental step or human step tests
- (D) the machine implemented test
- (E) the per se data transformation test.

#### a. Technological Arts Test

United States patent law does not support the application of a "technical aspect" or "technological arts" requirement. Title 35 of the United States Code does not recite, explicitly or implicitly, that inventions must be within the "technological arts" to be patentable. Section 101 of Title 35 recites that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor..." Accordingly, while an invention must be "new" and "useful," there is no statutory requirement that it fit within a category of "technological arts." Moreover,

although there has been some judicial discussion of the expression "technological arts" and its relationship to patentability, this dialogue has been rather limited and its viability is questioned. In 1970, the Court in In re Musgrave [431 F.2d 882, 167 USPQ 280 (CCPA 1970)] introduced a new standard for evaluating process claims under Section 101: any sequence of operational steps is a patentable process so long as it is within the technological arts so as to promote the progress of useful arts. Since the announcement of a new "technological arts" standard in Musgrave, only fourteen cases make reference to this so-called "technological arts" standard. In fact, only a handful of cases immediately following the Musgrave decision employed the "technological arts" standard in determining whether an invention is a process within the framework of Section 101. Instead, the Supreme Court refused to adopt that test when it reversed the Court of Customs and Patent Appeals in Gottschalk v. Benson, 409 U.S. 63, 175 USPQ 673 (1972). See also Diehr, 450 U.S. at 201, 209 USPQ at 14 (J. Stevens dissenting) (discussing the Court did not recognize the lower court's technological arts standard). Moreover, the CCPA effectively rejected the technological arts test in In re Toma, 575 F.2d 872, 878, 197 USPQ 852, 857 (CCPA 1978), by strongly suggesting that Musgrave was never intended to create a technological arts test for patent eligibility:

The language which the examiner has quoted [from Musgrave and its progeny relating to "technological arts"] was written in answer to "mental steps rejections and was not intended to create a generalized definition of statutory subject matter. Moreover, it was not intended to

form a basis for a new § 101 rejection as the examiner apparently suggests.

Toma, 575 F.2d at 878, 197 USPQ at 857.

In addition, the "technological arts" consideration is completely absent from recent Federal Circuit case law like State Street and AT&T. Given the current trend in the law, the Musgrave test should not be considered as current legal jurisprudence, and should not be used to evaluate process inventions for compliance with Section 101.

More important, the Musgrave decision should not be interpreted as imposing a new requirement that certain inventions be in the "technological arts" to be patentable. Instead, Musgrave should be limited to its facts and holding, i.e., that the computer-related invention in dispute was a patentable invention within the meaning of Section 101 because it was an advancement in technology which clearly promoted the useful arts. Thus, the Musgrave decision should not be construed as announcing a new stand-alone "technological arts" test for patentability, but should stand for the proposition that computer-implemented process claims may be patentable subject matter.

Furthermore, any attempts to define what is "in the technological arts" raises more questions than it appears to answer. The mere application of an article or a computer does not automatically qualify as eligible subject matter. See, e.g., Benson, 409 U.S. 63, 175 USPQ 673. Thus, this potential analysis improperly focuses on how the invention is implemented rather than on what is the practical application and the result that is achieved.

The emergence of a new patentability requirement that is not firmly rooted in our law also creates significant international concerns. First, the United States is a leader in intellectual property protection and strongly supports patent protection for all subject matter regardless of whether there is a "technical aspect" or the invention is in the "technological arts." The application of a 'technological art' requirement could be used to preclude the patenting of certain inventions not only in the United States, but also in other jurisdictions.

In Ex parte Lundgren, Appeal No. 2003-2088, Application 08/093,516, (Precedential BPAI opinion September 2005), the Board rejected the examiner's argument that Musgrave and Toma created a technological arts test. "We do not believe the court could have been any clearer in rejecting the theory the present examiner now advances in this case." Lundgren, at 8. The Board held that "there is currently no judicially recognized separate "technological arts" test to determine patent eligible subject matter under § 101." Lundgren at 9.

USPTO personnel should no longer rely on the technological arts test to determine whether a claimed invention is directed to statutory subject matter. There is no other recognized exceptions to eligible subject matter other than laws of nature, natural phenomena, and abstract ideas.

#### b. Freeman-Walter-Abele Test

USPTO personnel should not rely on the Freeman-Walter-Abele test to determine whether a claimed invention is directed to statutory subject matter. The Federal Circuit questioned the continuing viability of the Freeman-Walter-Abele test, noting that "[a]fter Diehr and Chakrabarty, the Freeman-Walter-Abele test has little,

if any, applicability to determining the presence of statutory subject matter.” State Street, 149 F.3d at 1374, 47 USPQ2d at 1601.

The Federal Circuit further stated “after Diehr and Alappat, the mere fact that a claimed invention involves inputting numbers, calculating numbers, outputting numbers and storing numbers, in and of itself, would not render it nonstatutory . . . .” State Street, 149 F.3d at 1374, 47 USPQ2d at 1602 (citing In re Alappat, 33 F.3d at 1544, 31 USPQ2d at 1557). The Federal Circuit in an en banc decision pointed out that “the ultimate issue always has been whether the claim as a whole is drawn to statutory subject matter.” Alappat, 33 F.3d at 1543 n. 21, 31 USPQ2d at 1557 n. 21.

In AT&T, the Federal Circuit focused the inquiry on whether the claim as a whole is drawn to statutory subject matter, deemed the “ultimate issue” by Alappat, rather than on the Freeman-Walter-Abele test which dissects the claim by removing the labeled nonstatutory subject matter and then labels the remaining portion of the claim as either data gathering steps or insignificant post solution activity. AT&T, 172 F.3d at 1359, 50 USPQ2d at 1453. The Federal Circuit concluded that “[w]hatever may be left of the earlier [Freeman-Walter-Abele] test, if anything, this type of physical limitations analysis seems of little value.” Id. Therefore, USPTO personnel should no longer rely on the Freeman-Walter-Abele test to determine whether a claimed invention is directed to statutory subject matter.

c. (i) The Mental Step Test

If a claimed process is performed by a machine, it is immaterial whether some or all the steps could be carried out by the human mind. As stated in Musgrave, 431



F.2d at 893, 167 USPQ at 289-90: “[w]e cannot agree with the board that these claims (all the steps of which can be carried out by the disclosed apparatus) are directed to non-statutory processes merely because **some or all** [emphasis added] the steps therein can also be carried out in or with the aid of the human mind or because it may be necessary for one performing the processes to think.” Therefore, USPTO personnel should no longer rely on the mental step test to determine whether a claimed invention is directed to statutory subject matter. If all the steps of a claimed process can be carried out in the human mind, examiners must determine whether the claimed process produces a useful, tangible, and concrete result, i.e., apply the practical application test set forth in State Street.

c. (ii) The Human Step Test

It is immaterial whether the process may be performed by some or all steps that are carried out by a human. Claims are not directed to non-statutory processes merely because **some or all** the steps therein can also be carried out in or with the aid of a human or because it may be necessary for one performing the processes to do some or all of the process steps. The inclusion in a patent of a process that may be performed by a person is not fatal to patentability. Alco Standard Corp. v. Tennessee Valley Authority, 808 F.2d 1490, 1496, 1 USPQ2d 1337, 1341 (Fed. Cir. 1987) (citing Diehr, 450 U.S. at 175); see e.g. Smith & Nephew, Inc. v. Ethicon, Inc., 276 F.3d 1304, 61 USPQ2d 1065 (Fed. Cir. 2001) (method claim where all the steps are carried out by a human). Therefore, USPTO personnel should no longer rely on the human step test to determine whether a claimed invention is directed to statutory subject matter.

#### d. Machine Implemented Test

Whether a claim recites a machine implemented process is not determinative of whether that process claim is statutory. Such a test would recognize that an abstraction merely implemented on a computer is statutory. An example will illustrate the point. Assume that  $y = 2x + C$ , where  $x$  and  $C$  are positive real numbers, is nothing more than an abstract idea. The claim recites: a computer- implemented process comprising providing  $x$  and  $C$  defined as positive real numbers, multiplying  $x$  by 2 to get  $Z$  and determining  $y$  by adding  $C$  to  $Z$ . Thus, the claim is nothing more than an abstract idea which is machine implemented and such a claim is not statutory. See, e.g., Benson, 409 U.S. 63, 175 USPQ 673 (finding machine-implemented method of converting binary-coded decimal numbers into pure binary numbers unpatentable). However, using the machine implemented test, the claim would be found to be statutory.

The Federal Circuit held that the mere manipulations of abstract ideas are not patentable. Schrader, 22 F.3d at 292-93, 30 USPQ2d at 1457-58. If a claimed process manipulates only numbers, abstract concepts or ideas, or signals representing any of the foregoing, the claim is not being applied to appropriate subject matter. Schrader, 22 F.3d at 294-95, 30 USPQ2d at 1458-59. The Federal Circuit also recognizes that the fact that a nonstatutory method is carried out on a programmed computer does not make the process claim statutory. Grams, 888 F.2d at 841, 12 USPQ2d at 1829(claim 16 ruled nonstatutory even though it was a computer-implemented process).

In addition, the Federal Circuit has recently noted that a “structural inquiry is unnecessary” when determining whether a process claim is eligible for patent protection. AT&T, 172 F.3d at 1359, 50 USPQ2d at 1452.

Thus, a finding that a claim fails to recite a computer-implemented process is not determinative in whether that claim passes muster under § 101. Therefore, USPTO personnel should no longer rely on the machine implemented test to determine whether a claimed invention is directed to statutory subject matter.

e. Per Se Data Transformation Test

Identifying that a claim transforms data from one value to another is not by itself sufficient for establishing that the claim is eligible for patent protection. See, e.g., Benson, 409 U.S. 63, 175 USPQ 673 (finding machine-implemented method of converting binary-coded decimal numbers into pure binary numbers unpatentable). In Benson, the claims invention was held to be merely a series of mathematical calculations having “no substantial practical application.” Id. at 71, 175 USPQ at 676. Therefore, claims that perform data transformation must still be examined for whether there is a practical application of an abstract idea that produces a useful, concrete, and tangible result.